

Abstract

An LED emitting light of wavelength mainly 375 nm or below. The LED includes a GaN layer (16), an n-clad layer (20), an AlInGaN buffer layer (22), a light emitting layer (24), a p-clad layer (26),
5 a p-electrode (30), and an n-electrode (32) arranged on a substrate (10). The light emitting layer (24) has a multi-layer quantum well structure (MQW) in which an InGaN well layer and an AlInGaN barrier layer are superimposed. The quantum well structure increases the effective band gap of the InGaN well layer and reduces the light
10 emitting wavelength. Moreover, by using the AlInGaN buffer layer (22) as the underlying layer of the light emitting layer (24), it is possible to effectively inject electrons into the light emitting layer (24), thereby increasing the light emitting efficiency.